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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,002	07/18/2003	Shuji Inada	MM4555.	4127
7590 01/03/2006 Anderson Kill & Olick 1251 Avenue of the Americas New York, NY 10020-1182			EXAMINER PUTTLITZ, KARL J	
			ART UNIT 1621	PAPER NUMBER
DATE MAILED: 01/03/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/623,002	Applicant(s) INADA ET AL.	
	Examiner Karl J. Puttlitz	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/622,518.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/18/2003</u> | 6) <input type="checkbox"/> Other: _____  |

### ***Claim Objections***

The examiner notes that the Preliminary Amendment cancels claims 1-35 and substitutes new claims 1-6 therefore. Applicant is reminded that the new claims should be claims 36-41. See M.P.E.P. § 714:

A canceled claim can be reinstated only by a subsequent amendment presenting the claim as a new claim with a new claim number. >The original numbering of the claims must be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. For example, when applicant cancels all of the claims in the original specification and adds a new set of claims, the claim listing must include all of the canceled claims with the status identifier (canceled) (the canceled claims may be aggregated into one statement). The new claims must be numbered consecutively beginning with the number next following the highest numbered claim previously presented (whether entered or not) in compliance with 37 CFR 1.126.

Example of listing of claims:
Claims 1-5 (canceled)
Claim 6 (withdrawn): A process for molding a bucket.
Claim 7 (previously presented): A bucket with a handle.
Claim 8 (currently amended): A bucket with a <del>green</del> blue handle.
Claim 9 (withdrawn): The process for molding a bucket of claim 6 using molten plastic material.
Claim 10 (original): The bucket of claim 8 with a wooden handle.
Claim 11 (canceled)
Claim 12 (previously presented): A bucket having a circumferential upper lip.
Claim 13 (not entered)
Claim 14 (new): A bucket with plastic sides and bottom.

Appropriate correction, and renumbering the claims is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for lower condensates such as ethylene terephthalate and lower alkyl terephthalates supported by the specification, does not reasonably provide enablement for all lower condensates that are compounds containing ethylene terephthalate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Even though the statute does not use the term "undue experimentation," it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation. *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988). See also *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988) ("The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation."). A patent need not teach, and preferably omits, what is well known in the art. *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384,

231 USPQ 81, 94 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984). Determining enablement is a question of law based on underlying factual findings. *In re Vaeck*, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991); *Atlas Powder Co. v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1576, 224 USPQ 409, 413 (Fed. Cir. 1984).” See M.P.E.P. § 2164.

In the instant case the claims cover the instant process any compound containing ethylene terephthalate. Based on the above standards, the disclosure must contained sufficient information to enable one skilled in the pertinent art to use this invention without undue experimentation. See M.P.E.P. 2164.01. Given the scope of the claims, it does not.

The specification and the examples do not provide sufficient disclosure that would provide one of ordinary skill guidance to practice the invention, given the infinite amount of possible permutations of the claimed lower condensates. In this regard, the disclosure does teach those of ordinary skill how to select lower condensates, where the instant specification only describes one example of a lower condensate, i.e. ethylene terephthalate. M.P.E.P. § 2164.06(b) citing “In *In re Vaeck*, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991), [where the court pointed to a] “limited disclosure by appellants of ...particular cyanobacterial genera operative in the claimed invention....” The claims at issue were not limited to any particular genus or species of cyanobacteria and the specification mentioned nine genera and the working examples employed one species of cyanobacteria.”

The examiner understands that there is no requirement that the specification disclose every possible embodiment if there is sufficient guidance given by knowledge in the art (See M.P.E.P. § 2164.05(a) "[t]he specification need not disclose what is well-known to those skilled in the art and preferably omits that which is well-known to those skilled and already available to the public. *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984).").

However, the instant case goes beyond what is known in the art, because the specification does not offer any guidance on how one of ordinary skill would go about practicing the invention for every lower condensate encompassed by the claims.

Applicant is reminded of the heightened enablement for chemical inventions. Specifically, the amount of guidance or direction needed to enable the invention is inversely related to the amount of knowledge in the state of the art as well as the predictability in the art. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). The "amount of guidance or direction" refers to that information in the application, as originally filed, that teaches exactly how to make or use the invention. The more that is known in the prior art about the nature of the invention, how to make, and how to use the invention, and the more predictable the art is, the less information needs to be explicitly stated in the specification. In contrast, if little is known in the prior art about the nature of the invention and the art is unpredictable, the specification would need more

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detail as to how to make and use the invention in order to be enabling. [I]n the field of chemistry generally, there may be times when the well-known unpredictability of chemical reactions will alone be enough to create a reasonable doubt as to the accuracy of a particular broad statement put forward as enabling support for a claim. This will especially be the case where the statement is, on its face, contrary to generally accepted scientific principles. Most often, additional factors, such as the teachings in pertinent references, will be available to substantiate any doubts that the asserted scope of objective enablement is in fact commensurate with the scope of protection sought and to support any demands based thereon for proof. [Footnote omitted.]

Here, the requirement for enablement is not met since the claims go far beyond the enabling disclosure. Base on the forgoing, therefore, claims 1-6 are *prima facie*, non-enabled for their full scope.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite a pre-decomposed product. It is unclear what a pre-decomposed product is since the claims do not recite a decomposed product.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06166747 (JP 747) in view of IN 145323.

The claims of the application are drawn to, inter alia, a process for producing bis-.beta.-hydroxyethyl terephthalate and/or a low condensate thereof from an aromatic polyester, comprising the steps of: heating the aromatic polyester comprising terephthalic acid as a main dicarboxylic acid component and ethylene glycol as a main glycol component together with bis-.beta.-hydroxyethyl terephthalate and/or a low condensate thereof to pre-decompose the aromatic polyester; and then, reacting the obtained pre-decomposed product with ethylene glycol to convert the terephthalic acid component of the pre-decomposed product into bis-.beta.-hydroxyethyl terephthalate and/or a low condensate thereof.

The claims also cover those embodiments wherein the pre-decomposition is carried out by heating the bis-.beta.-hydroxyethyl terephthalate and/or low condensate thereof to melt.

The claims also cover those embodiments wherein the pre-decomposition is carried out at a temperature of 150 to 265 C.



The claims also cover those embodiments wherein the pre-decomposition is carried out using 0.1 to 4.5 parts by weight of the bis- $\beta$ -hydroxyethyl terephthalate and/or condensate thereof based on 1 part by weight of the aromatic polyester.

The claims also cover those embodiments wherein a reaction between the pre-decomposed product and ethylene glycol is carried out at a temperature of 190 to 265 C.

The claims also cover those embodiments wherein a reaction between the pre-decomposed product and ethylene glycol is carried out using 1 part by weight of the pre-decomposed product and 0.3 to 10.0 parts by weight of ethylene glycol.

JP 747 teaches pepolymerisation of aromatic polyesters comprises adding aromatic polyesters to a reaction system containing molten aromatic dicarboxylates and their low polymers, and depolymerising at 200-250 C to make a pre-decomposed product.

Alkylene glycols are charged to the system in amounts of 0.5-5.0 times mole per acid component constituting and thus further depolymerising at 200-250 C and feeding a portion of the aromatic dicarboxylates and their low polymers to a polymerisation system. See attached Abstract.

JP 747 fails to explicitly state that the aromatic dicarboxylate is bis- $\beta$ -hydroxyethyl terephthalate. However, the invention suggests this compound with the requisite particularity and guidance that bis- $\beta$ -hydroxyethyl terephthalate would have been obvious to those of ordinary skill as the intended reactant. Moreover, those of ordinary skill would have been motivated to modify the reference to include a step of

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reacting the pre-decomposed product, or decomposed product with ethylene glycol to obtain the useful monomer, See, for example, IN 145323.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter, can be reached at telephone number (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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